Author Index to Volume 23

Aderangi, N. See Wasan, D. T., 181
Adler, P. M.
—; Mills, P. M.: Motion and Rupture of a Porous Sphere in a Linear Flow Field, 25

Bagley, E. B. See Jasberg, B. K., 437
Baird, D. G.
—; Ballman, R. L.: Comparison of the Rheological Properties of Concentrated Solutions of a Rodlike and Flexible Chain Polyamide, 505
Ballman, R. L. See Baird, D. G., 505
Barboza, M.
—; Rangel, C.; Mena, B.: Viscoelastic Effects in Flow through Porous Media, 281
Baumgartner, H. R. See Turitto, V. T., 735
Bergen, J. T. See Williams, G. E., 591
Bessho, N. See Osaki, K., 457, 617
Blackshear, P. L., Jr.
—; Christianson, T. J.; Majerle, R. J.; Vargas, F. F.: Resistance of Erythrocyte Flow into Pores, 681
Bogue, D. C. See Racin, R., 263
Brown, N. See Wu, J. B. C., 231
Buteau, L. See Racano, R., 39

Chauffoureaux, J. C.
—; Dehennau, C.; Van Rijckevorsel, J.: Flow and Thermal Stability of Rigid PVC, 1
Chin, H. B.
—; Han, C. D.: Studies on Droplet Deformation and Breakup. I. Droplet Deformation in Extensional Flow, 557
Christianson, T. J. See Blackshear, P. L., Jr., 681
Connelly, R. W.
—; Garfield, L. J.; Pearson, G. H.: Local Stretch History of a Fixed-End-Constant-Length-Polymer-Melt Stretching Experiment (Note), 651
Cowin, S. C.
—; Satake, M.: Continuum Mechanical and Statistical Approaches in the Mechanics of Granular Materials, 243

Darby, R.
Rebuttal to Denn's Comments on the Paper by Tsai and Darby (Note), 375
Dehennau, C. See Chauffoureaux, J. C., 1
Denn, M. M.
On the Evaluation of Rheological Constitutive Equations in a Paper by Tsai and Darby (Note), 371
Donnelly, T. A. See Miller, C. E., 57
Dreher, K. D.
—; Gogarty, W. B.: An Overview of Mobility Control in Micellar/Polymer Enhanced Oil Recovery Processes, 209

Ferry, J. D. See Taylor, C. R., 533

Garfield, L. J. See Connelly, R. W., 651
Glauz, R. D.
Viscoelastic Vibrating Reed Under Gravity, 353
Gogarty, W. B. See Dreher, K. D., 209

Hampel, W. L., III. See Hochmuth, R. M., 669
Han, C. D. See Chin, H. B., 557
Hochmuth, R. M.
—; Hampel, W. L., III: Surface Elasticity and Viscosity of Red Cell Membrane, 669
Hong, S. D. See Soong, D., 301
Hori, Y. See Okubo, S., 625
Huilgol, R. R.
Viscometric Flows and Corotational Stress Relations (Note), 383

Isono, Y.
—; Kajiura, H.; Nagasawa, M.: Estimation of the First Normal Stress Difference from Shear Stress Data in Polymer Rheology (Note), 79

Jasberg, B. K.
—; Mustakas, G. C.; Bagley, E. B.: Extrusion of Defatted Soy Flakes—Model of a Plug Flow Process, 437
Johansen, R. T.
Overview of Selected Oil Recovery Processes, 167
Jones, W. M.
Flow of Gases through Ultrafine Capillaries: A Comment, 525

Kajiura, H. See Isono, Y., 79

Kaloni, P. N. See Kamel, M. T., 141
Kamel, M. T.
—; Kaloni, P. N.; Tory, E. M.: Two-Dimensional Internal Flows of Polar Fluids, 141
Kanno, T. See Umeya, K., 123
Kirkpatrick, J. P.
—; McIntire, L. V.; Moake, J. L.; Peterson, D. L.: Dynamic Rheological Studies of Coagulation and Fibrinolysis, 769
Kojimoto, T. See Osaki, K., 457, 617
Kurata, M. See Osaki, K., 457, 617

Lavery, J. P. See Miller, C. E., 57
Lei, G. See Racano, R., 39
Lynch, E. C. See O'Rear, E. A., 721

Majerle, R. J. See Blackshear, P. L., Jr., 681
McIntire, L. V. See Kirkpatrick, J. P., 769; O'Rear, E. A., 721
Preface: Symposium on Biorheology at the 49th Annual Meeting of The Society of Rheology, Houston, Texas, October 24th, 1978, 667
McKenna, G. B.
—; Zapas, L. J.: Nonlinear Viscoelastic Behavior of Poly(methyl Methacrylate) in Torsion, 151
McNamara, J. J. See Wasan, D. T., 181
Mena, B. See Barboza, M., 281
Mendelson, R. A.
A Method for Viscosity Measurements of Concentrated Polymer Solutions in Volatile Solvents at Elevated Temperatures, 545
Miller, C. E.
—; Lavery, J. P.; Donnelly, T. A.: Determination of Elastic Parameters For Human Fetal Membranes, 57
Mills, P. M. See Adler, P. M., 25
Mitslal, T. See Racano, R., 39
Moake, J. L. See Kirkpatrick, J. P., 769
Munstedt, H.
New Universal Extensional Rheometer for Polymer Melts. Measurements on a Polystyrene Sample, 421
Mustakas, G. C. See Jasberg, B. K., 437

Nagasawa, M. See Isono, Y., 79

Okubo, S.
—; Hori, Y.: Shear Stress at Wall and Mean Normal Stress Difference in Capillary Flow of Polymer Melts, 625
Orbon, S. J. See Plazek, D. J., 477
O'Rear, E. A.
—; Shah, B. O.; Lynch, E. C.; McIntire, L. V.: Use of a Rheological Technique to Evaluate Erythrocyte Membrane Alterations, 721
Osaki, K.
—; Bessho, N.; Kojimoto, T.; Kurata, M.: Flow Birefringence of Polymer Solutions in Time-Dependent Field, 457
—; Bessho, N.; Kojimoto, T.; Kurata, M.: Flow Birefringence of Polymer Solutions in Time-Dependent Field. Relation between Normal and Shear Stresses on Application of Step-Shear Strain, 617

Pearson, G. H. See Connelly, R. W., 651
Peterson, D. L. See Kirkpatrick, J. P., 769
Phan-Thien, N.
On the Time–Temperature Superposition Principle of Dilute Polymer Liquids, 451
Philippoff, W. See Racano, R., 39
Plazek, D. J.
—; Raghupathi, N.; Orbon, S. J.: Determination of Dynamic Storage and Loss Compliances from Creep Data, 477
Poehlein, G. W. See Williams, G. E., 591
Powell, R. L.
—; Schwarz, W. H.: Nonlinear Dynamic Viscoelasticity, 323

Racano, R.
—; Mitslal, T.; Buteau, L.; Lei, G.; Philippoff, W.: The Analysis of the Entrance Flow into a Slit. II. Experimental, 39
Racin, R.
—; Bogue, D. C.: Molecular Weight Effects in Die Swell and in Shear Rheology, 263
Raghupathi, N. See Plazek, D. J., 477
Rangel, C. See Barboza, M., 281

Sampath, K. See Wasan, D. T., 181
Satake, M. See Cowin, S. C., 243
Schwarz, W. H. See Powell, R. L., 323
Shah, B. O. See O'Rear, E. A., 721
Shah, S. M. See Wasan, D. T., 181
Shen, M. See Soong, D., 301
Soong, D.
—; Shen, M.; Hong, S. D.: Viscoelastic Properties of Entangled Polymer. IV. Binary Blends of Monodisperse Homopolymers, 301
Stephenson, S. E. See Wagner, M. H., 489

Taylor, C. R.
—; Ferry, J. D.: Nonlinear Stress Relaxation of Polyisobutylene in Simple Extension and Recovery After Partial Relaxation, 533
Thurston, G. B.
Erythrocyte Rigidity as a Factor in Blood Rheology: Viscoelastic Dilatancy, 703
Tirrell, M.
—; Torkelson, J.: Approaches to the Modelling of the Hydrodynamic Properties of Rigid Biomacromolecules: Some Quantitative Comparisons, 751
Torkelson, J. See Tirrell, M., 751
Tory, E. M. See Kamel, M. T., 141
Turitto, V. T.
—; Weiss, H. J.; Baumgartner, H. R.: Rheological Factors Influencing Platelets Interaction with Vessel Surfaces, 735

Umeya, K.
—; Kanno, T.: Effect of Flocculation on the Dilatant Flow for Aqueous Suspensions of Titanium Dioxides, 123

Van Rijckevorsel, J. See Chauffoureaux, J. C., 1
Vargas, F. F. See Blackshear, P. L., Jr., 681

Wagner, M. H.
—; Stephenson, S. E.: The Irreversibility Assumption of Network Disentanglement in Flowing Polymer Melts and its Effects on Elastic Recoil Predictions, 489
Wasan, D. T.
—; McNamara, J. J.; Shah, S. M.; Sampath, K.; Aderangi, N.: The Role of Coalescence Phenomena and Interfacial Rheological Properties in Enhanced Oil Recovery: An Overview, 181
Weiss, H. J. See Turitto, V. T., 735
Williams, G. E.
—; Bergen, J. T.; Poehlein, G. W.: Rheological Behavior of High-Resin-Level Plastisols, 591
Wu, J. B. C.
—; Brown, N.: An Equation for Stress Relaxation During Crazing, 231

Zapas, L. J. See McKenna, G. B., 151

Subject Index to Volume 23

Abstracts and Notes are denoted by the letters
A and N, respectively, following the page number.

Adhesion, 735
Aggregates, 25

Biomacromolecules, 751
Biorheology, 667
BKZ elastic fluid, 151
BKZ model, 489
Blood rheology, 703

Capillaries, 525
Capillary extrusion rheometer, 545
Capillary flow, 281, 625
Cell deformability, 721
Cell flow, 681
Cell membranes, 669
Cell rheology, 667
Coagulation, 769
Coalescence, 181
Constitutive equation, 489
Constitutive equations, 371(N), 375(N)
Continuum mechanics, 243
Corotational stress, 383(N)
Coupling number, 141
Crazing, 231
Creep, 477

Die swell, 263
Diffusion, 751
Dilatant behavior, 667
Dilatant flow, 123
Droplet breakup, 557
Droplet deformation, 557
Dynamic loss compliance, 477
Dynamic mechanical moduli, 301
Dynamic storage compliance, 477
Dynamic viscoelasticity, 323

Elasticity, 57
Elastic recoil, 489
Elongation, 421, 651(N)
Elongational stresses, 281
Emulsion stability, 181
Entangled polymer, 301
Entanglement network, 505
Entrance flow, 39
Erythrocyte flow, 681
Erythrocytes, 703, 721
Extension, 533
Extensional flow, 557
Extensional rheometer, 421
Extension ratios, 57
Extrusion, 1, 437

Fetal membranes, 57
Fibrinolysis, 769
First normal stress difference, 79(N)
Flocculation, 123
Flow birefringence, 457, 617
Flow velocity distribution, 1
Flow visualization, 281

Gas flow, 525
Granular materials, 243

48th Annual Meeting of The Society of Rheology, 83(A)
49th Annual Meeting of The Society of Rheology, 387(A)
Hemorheology, 667

Internal flows, 141
Intrinsic viscosity, 751

Journal of The Society of Rheology, Japan, 257(A), 417(A), 663(A)

Langevin analysis, 451

Melt stretching, 651(N)
Membranes, 667, 721, 769
Membrane viscosity, 681
Mobility control, 209
Modelling, 751
Molecular weight effects, 263
Monodisperse polymers, 301

Network disentanglement, 489
Nonlinear effects, 323
Normal stress, 151, 457, 505, 617, 625

Oil recovery, 167, 181, 209

Plasma, 769
Plastisols, 591
Platelets, 735
Polar fluids, 141
Polyacrylamide, 281
Polyamide, 505
Polycarbonate, 231
Polyethylene, 489
Polyisobutylene, 533
Polymer liquids, 451
Polymer melts, 421, 489, 625
Polymer solutions, 457, 545
Poly(methyl methacrylate), 151, 231
Polystyrene, 263, 421, 457, 617
Poly(vinyl chloride), 1, 591
Pores, 25, 681
Porous media, 281

Relaxation, 533
Relaxation time, 751
Rheogoniometry, 263, 323

Sedimentation, 751
Shear sensitivity, 591
Solutions, 505
Soy flakes, 437
Stability, 123
Step-shear strain, 617
Streamlines, 141
Stress relaxation, 231, 533
Stress relaxation moduli, 301
Superposition, 451
Surface activity, 167, 181, 209
Surface elasticity, 669
Suspensions, 25, 123, 591

Thrombus formation, 735
Titanium dioxide, 123
Torsion, 151
Tracers, 1, 39

Vibrating reed, 353
Viscoelastic dilatancy, 703
Viscoelasticity, 151, 281, 301
Viscometric flows, 383(N)
Viscosity, 545

Wall shear stress, 625

Zero shear viscosity, 301

JOURNAL OF RHEOLOGY

Volume 23, 1979

Editor: **Raymond R. Myers**

Kent State University
Kent, Ohio

Assistant Editors: **Edward A. Collins**

Diamond Shamrock Company
Painesville, Ohio

Shigeharu Onogi

Kyoto University
Kyoto, Japan

J. George Savins

Mobil Research and
Development Corporation
Dallas, Texas

Charles L. Sieglaff

Diamond Shamrock Company
Painesville, Ohio

A. Silberberg

Weizmann Institute of Science
Rehovoth, Israel

James L. White

University of Tennessee
Knoxville, Tennessee

an **Interscience® Publication**

published by **JOHN WILEY & SONS** New York • Chichester • Brisbane • Toronto

Copyright © 1979 by The Society of Rheology, Inc.